

## All Recommendations

Wednesday, October 03, 2012 12:32:02 PM

Record #	ABU	Unit	I/R	Item Nbr	Additional Consideration (Recommendation)	ABU Proposal	Resolution	Verifier Comments	Verifier Name	Verified On	Due Date	RR	SOE	Assigned To	Status
17448	D&R	#5 H2S	2012	1.11.1.1	1. Issue discussed is that on some occasions in the past the operators have been unable to establish V-800 separator bottoms flow to V-899 when attempting to lower the level in V-800 due to plugging in the blowdown line. This can potentially contribute to H2S carryover into the fuel gas system and possible personnel exposure to H2S at the furnace burners if the V-800 level can not be drained. ☐ Consider re-configuring the V-800 bottoms blowdown piping to reduce the potential for plugging or implementing some other method to prevent or reduce the potential for plugging."	Declined. Non-actionable item; the risk meets the Qualitative Risk Goal and current management of risk is consistent with Chevron's guiding principles.  This recommendation is associated with the following scenarios: 1.9.1.1, 1.9.1.2, 1.11.1.1, 1.11.1.2				7/10/2013	6	S	Preciado, Silvano E.	Declined	
17450	D&R	#5 H2S	2012	4.1.7.1	2. Issue discussed is the lack of protection from particulates in the sour gas stream and the potential for plugging of E-825A/B in between plant turnarounds leading to reduced refinery throughput or an unplanned shutdown or pit stop. ☐ Consider installing particulate filters on the Rich DEA upstream of E-825A/B or performing an engineering study to determine feasibility of installing blocks and bypass around E-825A/B to permit cleaning the exchangers on the run."	Declined. Not a safety issue. This asset item will be managed as a regular business item.				7/10/2013	6	A	Preciado, Silvano E.	Declined	

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17451	D&R	#5 H2S	2012	6.1.2.1	3. Issue discussed is that there is no immediate alarm to alert the operator that the C-830 overhead H2S pressure control valve 15PV027 has closed. Closing 15PV027 reduces removal of H2S from the fuel gas system. This can potentially contribute to H2S carryover into the fuel gas system and possible personnel exposure to H2S at the furnace burners. ☐ Consider adding a low flow alarm to the existing flow measurement 15FI031 on C-830 overhead "	Declined. Non-actionable item; the risk meets the Qualitative Risk Goal and current management of risk is consistent with Chevron's guiding principles.					7/10/2013	7	S	Preciado, Silvano E.	Declined
17452	D&R	#5 H2S	2012	6.5.2.1	4. Issue discussed is that E-820 inlet temperature has a high alarm and there is no alarm shown for E-820 outlet temperature. PHA team believes that it would be beneficial to have an alarm on the outlet also in order to monitor exchanger performance. ☐ Consider adding a high temperature alarm trip point to the existing 15TI211 measurement signal in the DCS."	Declined. Not a safety issue. This asset item will be managed as a regular business item.					7/10/2013	6	A	Preciado, Silvano E.	Declined
17453	D&R	#5 H2S	2012	7.1.2.1	5. Issue discussed is the plugging of the C-860 butane distributor that was discovered during the 2011 #4 Crude Unit major turnaround and the potential for impacting refinery process unit feedrates in the future. ☐ Consider installation of some form of particulate removal upstream of C-860."	Declined. Not a safety issue. This asset item will be managed as a regular business item.					7/10/2013	6	S	Preciado, Silvano E.	Declined

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17454	D&R	#5 H2S	2012	8.12.1.1	6. Issued discussed is that P-845/A cannot be started from control room until field operator manually opens seal flush valve on both pumps leading to the possibility of personnel exposure to H2S during startup of emergency scrubber C-840. ☐ Consider updating job aid 5HS4205j to require that seal flush block valves be kept open to eliminate the need for field operator to open valves prior to starting pump from the control house. This will require periodic draining of C-840 to remove water level increase due to the seal flush flow."	Consider updating job aid 5HS4205j to require that seal flush block valves be kept open to eliminate the need for field operator to open valves prior to starting pump from the control house.					7/10/2013	6	S	Preciado, Silvano E.	In Progress
17455	D&R	#5 H2S	2012	9.1.1.1	7. Issue discussed is that D-852 vacuum relief depends on loop seal pulling inward by 8' water column. There is no documentation to show that the vessel is designed to withstand that amount of vacuum. There is no documentation to show that the loop seal is designed for all vacuum relief scenarios. Failure of D-852 could lead to inability the to inject wash water into DHT and NHT and potential plant shutdowns. ☐ Consider having design engineering review D-852 maximum vacuum capabilities. Once vessel design criteria is established, confirm that the loop seal is appropriate vacuum relief or that appropriate protection is installed."	Consider having design engineering review D-852 maximum vacuum capabilities. Once vessel design criteria is established, confirm that the loop seal is appropriate vacuum relief or that appropriate protection is installed.					7/10/2013	5	A	Raiford, Alison L.	In Progress

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17456	D&R	#5 H2S	2012	9.1.2.1	8. Issue discussed is that D-852 design pressure is shown as 10 PSIG and rupture disc C5-12 is also set at 10 PSIG. This design pressure seems to be higher than the PHA Team would expect for a cone roof vessel Failure of D-852 could lead to the inability to inject wash water into DHT and NHT and potential plant shutdowns. ☐ ☐ Consider having design engineering review D-852 maximum pressure capabilities. Once vessel design criteria is established, confirm that the appropriate overpressure protection is installed."	Consider having design engineering review D-852 maximum pressure capabilities. Once vessel design criteria is established, confirm that the appropriate overpressure protection is installed.				7/10/2013	8	S		Raiford, Alison L.	In Progress
17457	D&R	#5 H2S	2012	11.1.7.1	9. Issue discussed is that there is no independent alarm to alert operators that the boiler feed water flow is stopped while blending anhydrous ammonia into aqua ammonia at T-3146 leading to potential personnel exposure/injury to toxic vapors being released from tank breather vent. ☐ Consider conducting a toxic vapor release modeling scenario to determine the potential concentration and extent of NH3 in the atmosphere around #5 H2S plant. ☐ Consider reviewing the indications and controls available to the operator to mitigate this scenario and make recommendation for any needed improvements."	Consider conducting a toxic vapor release modeling scenario to determine the potential concentration and extent of NH3 in the atmosphere around #5 H2S plant.  Consider reviewing the indications and controls available to the operator to mitigate this scenario and make recommendation for any needed improvements.				7/10/2013	6	S		Preciado, Silvano E.	In Progress

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17458	D&R	#5 H2S	2012	14.5.1.1	10. Issue discussed was identification of minor errors on the #5 H2S plant P&IDs. ☐ Consider updating P&IDs per PHA redlines. ☐ Non-Risk Ranked Actionable Item required to meet regulatory/statutory requirements and/or to be consistent with Chevron's guiding principles."	Consider updating P&IDs per PHA redlines.					7/10/2013			Raiford, Alison L.	In Progress
17459	D&R	#5 H2S	2012	14.15.1.1	11. Issue discussed was piping specification break review. ☐ Consider reviewing the piping specification breaks associated with the #5 H2S plant equipment to ensure appropriateness for service. Correct P&IDs as needed. Make corrections in field as needed. ☐ Non-Risk Ranked Actionable Item required to meet regulatory/statutory requirements and/or to be consistent with Chevron's guiding principles."	Consider reviewing the piping specification breaks associated with the #5 H2S plant equipment to ensure appropriateness for service. Correct P&IDs as needed. Make corrections in field as needed.					7/10/2013			Raiford, Alison L.	In Progress
17450	D&R	#5 H2S	2012	14.14.1.1	12. (From Amine BIN Vulnerabilities List) ☐ Update job aid 5HS4701j - K-826, DEA Filter, Cartridge Replacement to include pyrophoric material warning and to include notification to maintenance of pyrophoric material handling and disposal concerns. ☐ Non-Risk Ranked Actionable Item required to meet regulatory/statutory requirements and/or to be consistent with Chevron's guiding principles.☐	Consider updating job aid 5HS4701j - K-826, DEA Filter, Cartridge Replacement to include pyrophoric material warning and include notification to maintenance of pyrophoric material handling and disposal concerns.					7/10/2013			Preciado, Silvano E.	In Progress

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17451	D&R	#5 H2S	2012	14.9.1.1	13. (From Latent Condition Assessment) Opportunity for improvement to lighting. ☐ Consider conducting a lighting survey of the #5H2S Plant area and consult operators to determine if area lighting should be improved. If survey indicates potential improvement necessary implement improvements. ☐ Non-Risk Ranked Actionable Item required to meet regulatory/statutory requirements and/or to be consistent with Chevron's guiding principles."	Consider conducting a lighting survey of the #5H2S Plant area and consult operators to determine if area lighting should be improved. If survey indicates potential improvement necessary implement improvements.					7/10/2013			Preciado, Silvano E.	In Progress

Totals: 13 Records